Getting to Compliance

Washington DC Energy Conservation Code

DEPARTMENT OF CONSUMER AND REGULATORY AFFAIRS

OVERVIEW

- How we adopt code
- How we enforce code
- How do we get to compliance?

WHO IS "WE"?

Department of Consumer and Regulatory Affairs

The mission of the Department of Consumer and Regulatory Affairs (DCRA) is to protect the health, safety, economic interests and quality of life of residents, businesses and visitors in the District of Columbia by ensuring code compliance and regulating business.

HOW DOES DC ADOPT CODE?

Construction Codes Coordinating Board

- Technical Advisory Groups
- Public Comment Period(s)
- Approval by City Council
- 2013 DC Codes adopted March 28, 2014
- 2016 cycle has begun

AND ENFORCE CODES?

Permitting and Inspections

- 2 distinct divisions
- Third Party review and inspection
- Historic, Zoning, DDOE, DDOT, WMATA, and federal (as applicable)
- Green Building Division

WHAT IS A GREEN DIVISION?

Green Building Division

Regulations of green codes including:

- Green Building Act
- Energy Conservation Code
- Green Construction Code

WHAT DOES THAT MEAN?

Green Building Division

- Preliminary Design Reviews
- Plan Review and Permitting
- Inspections
- Certificate of Occupancy
- Enforcement

WHAT DOES THAT REALLY MEAN

… for energy compliance?

- ICC code development
- Research
- Develop Tools
- Education and Outreach

GREEN BLDG DIVISION

IECC Code Development

- Review, research and track each code change proposal
- Participate in and testify at Public Action Hearings
- Advise 12 voting members of DCRA and vote

GREEN BLDG DIVISION

Research

- IMT and Britt/Makela Group, Inc.
- Evaluate DC's energy code enforcement
- Determine informal compliance rate
- Test application of City Energy Project (CEP) Compliance Methodology

RESEARCH

Review Process

- 10 Commercial projects
- 3 Single Family projects
- Data collection checklist:
  - Document Review
  - Field Inspections

RESEARCH

Findings

- Buildings did not meet minimum standard
- Documentation did not show compliance
- Repeated, significant errors
  - window area
  - slab edge insulation
  - lighting controls missing or misinstalled
  - U-values

RESEARCH

Suggestions

- Program Staffing
- Documentation on the plans
- Training and Education
- Integration into all reviews and inspections

PERMITTING

RE: Documentation on the plans

- Energy Model Inputs/ Outputs
- Load Calculations
- Code compliance reflected in drawings

TOOLS

RE: Documentation on the plans

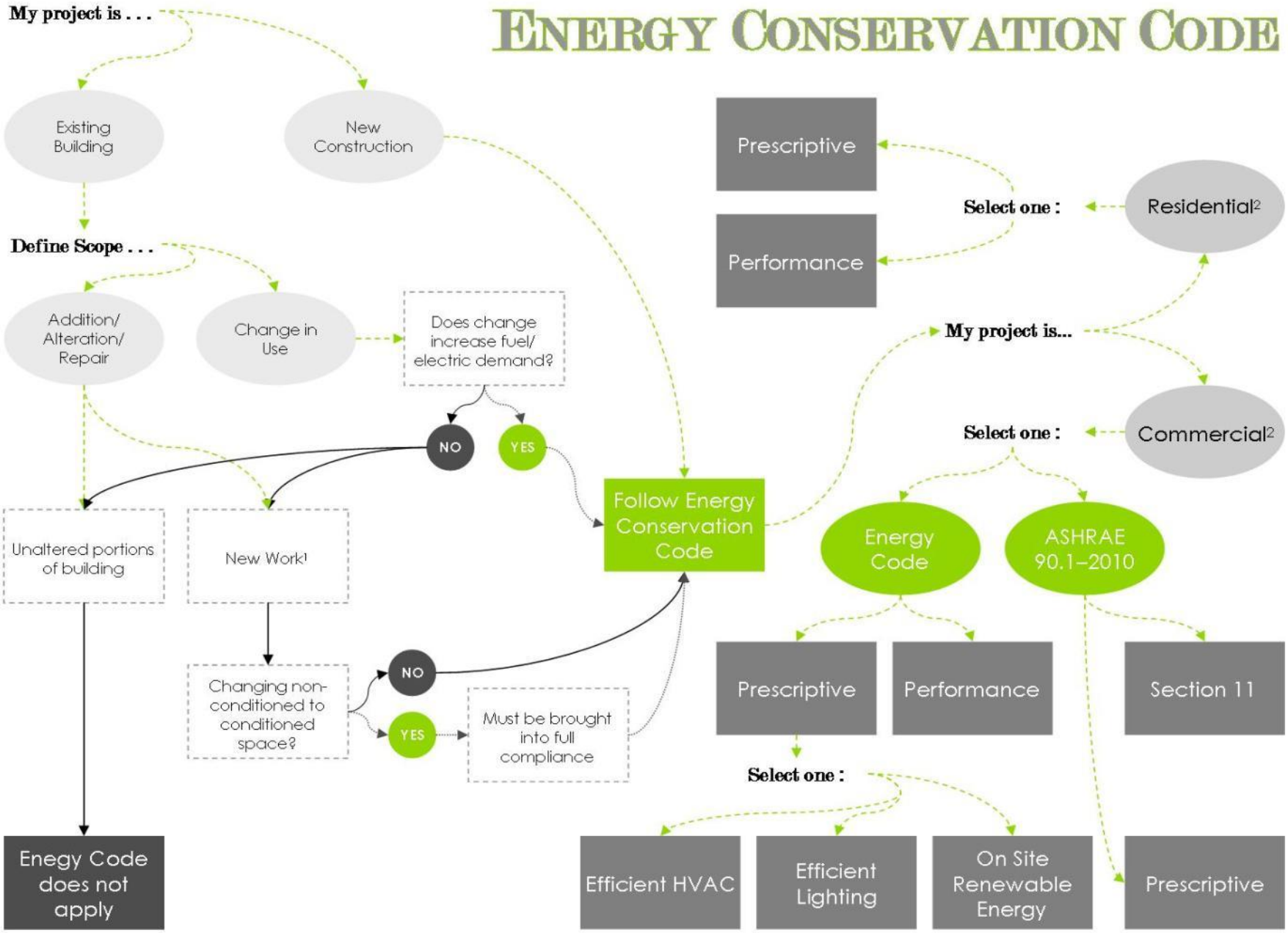
- Green Building Program Manual
- Sectional Reference Guides
- Energy Verification Sheets

GBPM + SECTIONAL REFERENCE

RE: Documentation on the plans

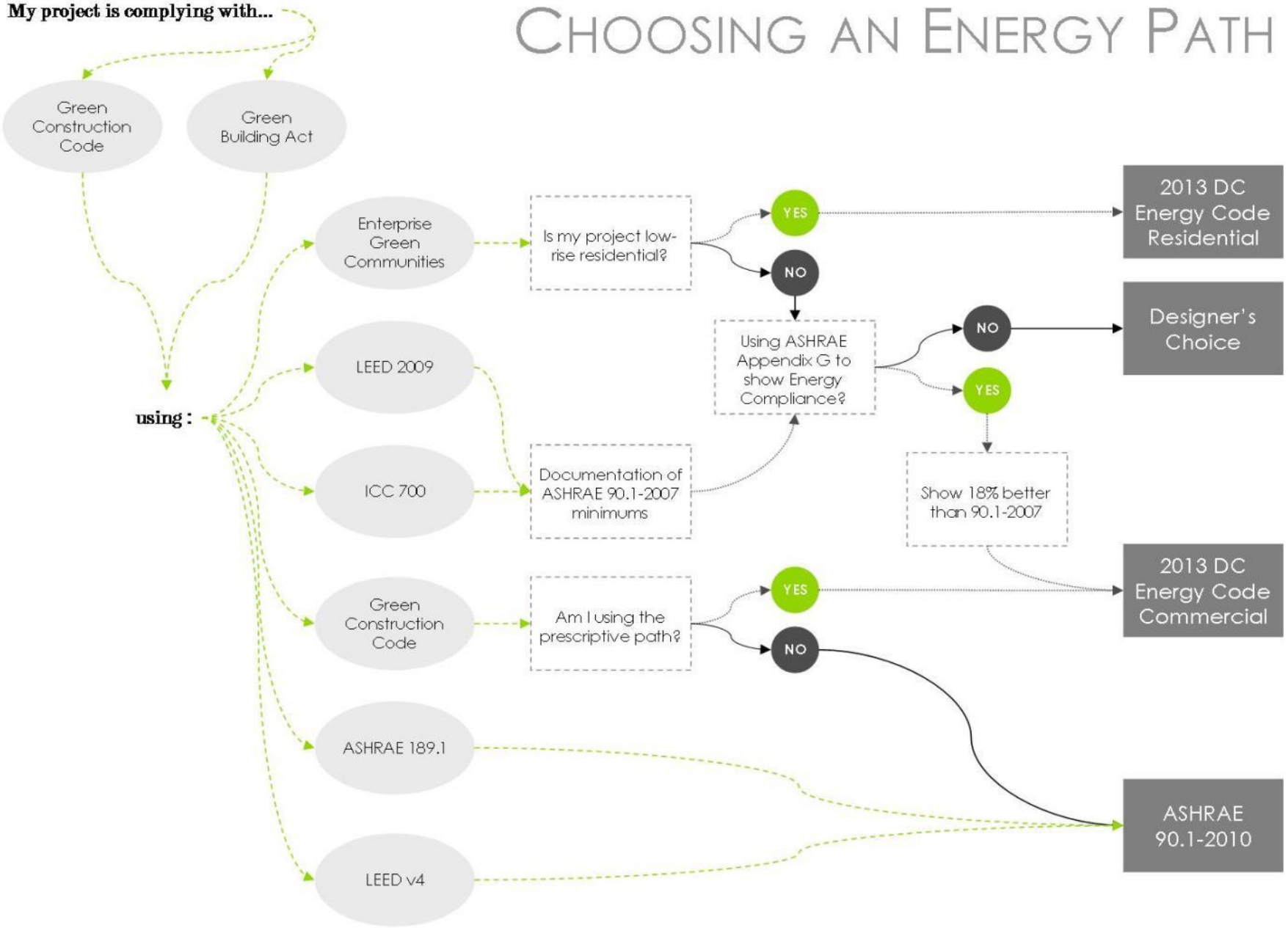
- Help determine applicability
- Navigate code compliance from design to occupancy
- Provide additional guidance on what should and can be submitted
- Covers Green and Energy Codes

Energy Conservation Code



[1] reference 12 DCMR A 101.4.7.5.3 Additions, Alterations, Renovations or Repairs.
[2] as defined by the Energy Conservation Code

CHOOSING AN ENERGY PATH



ENERGY VERIFICATION SHEETS

RE: Documentation on the plans

- Standardizes communication
- Informs project teams of high priority measures
- Provides a faster energy review
- Improves DC energy compliance

DCRA Energy Verification Sheet

2013 DC Energy Code Non-Residential Version 1.0_2014

EN-1

Permit #: Address:

Compliance Path Used: □ Prescriptive □ Trade Off □ Performance

Project Type: □ New Non-Residential Project □ Non-Residential Addition □ Renovation

2013 DC Energy Code Sect. #	Pre–Inspection Section Description	Prescriptive Code Value	Plan Value	Designer Identified Dwg Page	Plan Review	Field Insp.
101.4.7.6, C402.4.1.2 SR	Plans, specifications, and calculations give info for air–barrier energy compliance. Assembies meet ASTM E 2357, ASTM E 1667, other. Materials require sealed joints	N/A				
C403.2.1 SR	Provide Sum of All Exterior Wall Area in Square Feet	N/A				
C403.2.1 SR	Provide Sum of All Exterior Window Area in Square Feet	N/A				
C403.2.1 SR	Calculate Window to Wall Area (WWA) based on values above.	N/A				
C403.2.1 SR	If WWA≥ 30%, then prescriptive path cannot be used, unless exemption and calculations.	N/A				
C402.3.2	In enclosed spaces > 10,000 ft2 directly under a roof with ceiling heights >15 ft. and typical daytime occupancies (See Code), the following requirements apply: (a) the min. daylight zone under skylights is >= half the floor	N/A				

2013 DC Energy C Sect. #
C404.6
C404.3
C404.5
C404.4

2013 DC Energy C Sect. #
C403.2

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PERMITTING + INSPECTION

RE: Integrating Review & Inspection

- Energy Verification Sheet
- Inspection Checklists

2013 DC Energy Code Sect. #	Foundation Inspections	Prescriptive Code Value	Plan Value	Identified Dwg Page	Plan Review	Field Insp.
C402.1.1 SR	Below Grade Insulation Wall Value.	R–7.5				
C303.2 INSP	Below Grade Insulation Wall Installed per manufacturer's instructions	N/A	N/A			
C402.1.1 SR	Slab edge insulation value	Heated: R–15,24" Unheated: R–20,24"				
C303.2 INSP	Slab edge Insulation Installed per manufacturer instructions	N/A	N/A			
C403.2.7, C408.2.8, SR	Ext. Insulation protected against damage, sunlight, moisture, wind, landscaping maintenance activities.	N/A				
C403.2.7 C403.2.8 MR	Piping, ducts and plenum are insulated and sealed when installed in or under a slab	N/A				
C402.2.8 M	Bottom surface of floor structures using radiant heating insulated to R–3.5	N/A	N/A			
C403.2.4 E	Freeze protection & snow/ice melting sys. sensors for future connection to controls.	N/A	N/A			

2013 DC Energy Code Sect. #	Framing/ Rough–In Inspection	Prescriptive Code Value	Plan Value/ Strategy	Identified Dwg Page	Plan Review	Field Insp.
C303.1.3	Fenetration products are	N/A				

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EDUCATION + OUTREACH

RE: Training and Education

- IECC Model Code
- DC Compliance Paths
- Energy Verification Sheets
- External Sessions

QUESTIONS?

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http://dcra.dc.gov/page/green-building-program

http://buildgreenDC.org

green.building@dc.gov